



Wichita Retirement Systems

June 26, 2012

City Council Workshop

Presentation

History

- Retirement System Membership
- System Assets, Liabilities and Funded Ratios
- Employer Contribution Rates

Actuary's Presentation

- Overview of Public Fund Survey Results
- Projection Model – Investment Returns
- Projection Model – Alternate Plan Designs

Wichita Employees' Retirement System

(Established January 1, 1948)

Plan 1 – Defined Benefit Plan

Applies to:

- All employees hired or rehired before July 18, 1981
- All employees who did not elect to convert to Plan 2 prior to December 18, 1981

Basic Plan Provisions

Employee:

- Maximum Pension Benefit: 75% of Final Average Salary; attained after 30 years of service
- 3% annual increase (non-compounded)
- Vesting achieved after 7 years of service

Normal Retirement Age: Age 60; but employees can retire at any age with 30 years of service

Surviving Spouse: Pension Benefit equal to 50% of employee's benefit including annual increases

Employee contribution: 6.4% of salary

City contribution: Actuarially determined rate

Plan 2 – Defined Benefit Plan

Applies to:

- All employees hired on or after July 18, 1981, but prior to January 1, 1994
- All employees that elected to convert to Plan 2 prior to December 18, 1981
- All employees hired on or after January 1, 1994 that elected to switch from Plan 3 to Plan 2 after 7 years of service

Basic Plan Provisions

Employee:

- Maximum Pension Benefit: 75% of Final Average Salary; attained after 33 1/3 years of service
- 2% annual increase (non-compounded)
- Vesting achieved after 7 years of service

Normal Retirement Age: Age 62

Surviving Spouse:

Pension Benefit equal to 50% of employee's benefit including annual increases

Employee contribution: 4.7% of salary

City contribution: Actuarially determined rate

Plan 3 – Defined Contribution Plan

Applies to:

- All employees hired on or after January 1, 1994
- All employees hired on or after January 1, 1994 that elected to remain in Plan 3 after 7 years of service

Employee contribution: 4.7% of salary

City contribution: 4.7% of salary

Note: Employee is always 100% vested in their contribution portion of account

Vesting Schedule for City contribution portion of account:

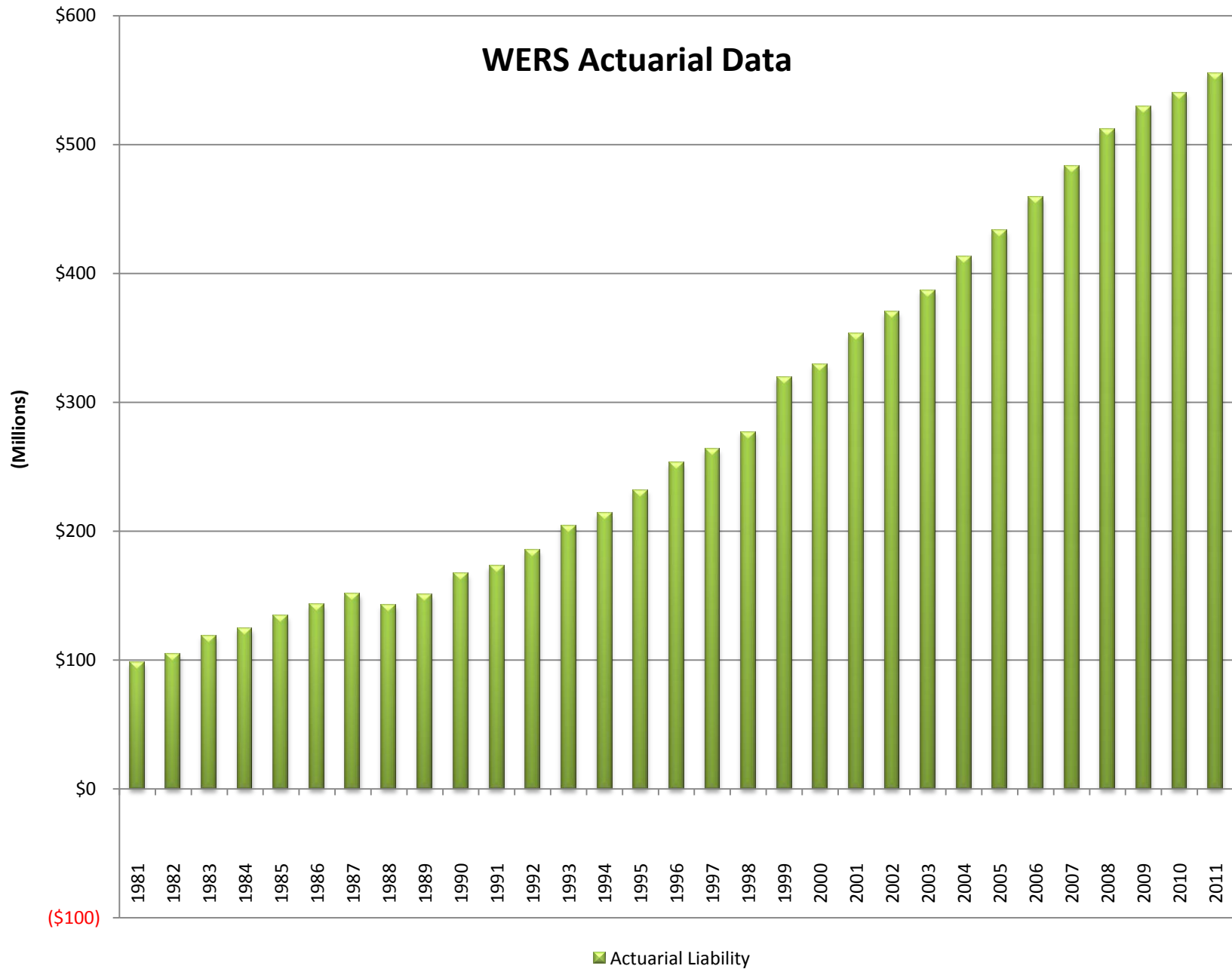
- 25% after 3 years of service
- 50% after 5 years of service
- 100% after 7 years of service

Note: At 7 years of service, member has one-time irrevocable option to switch to Plan 2 or remain in Plan 3

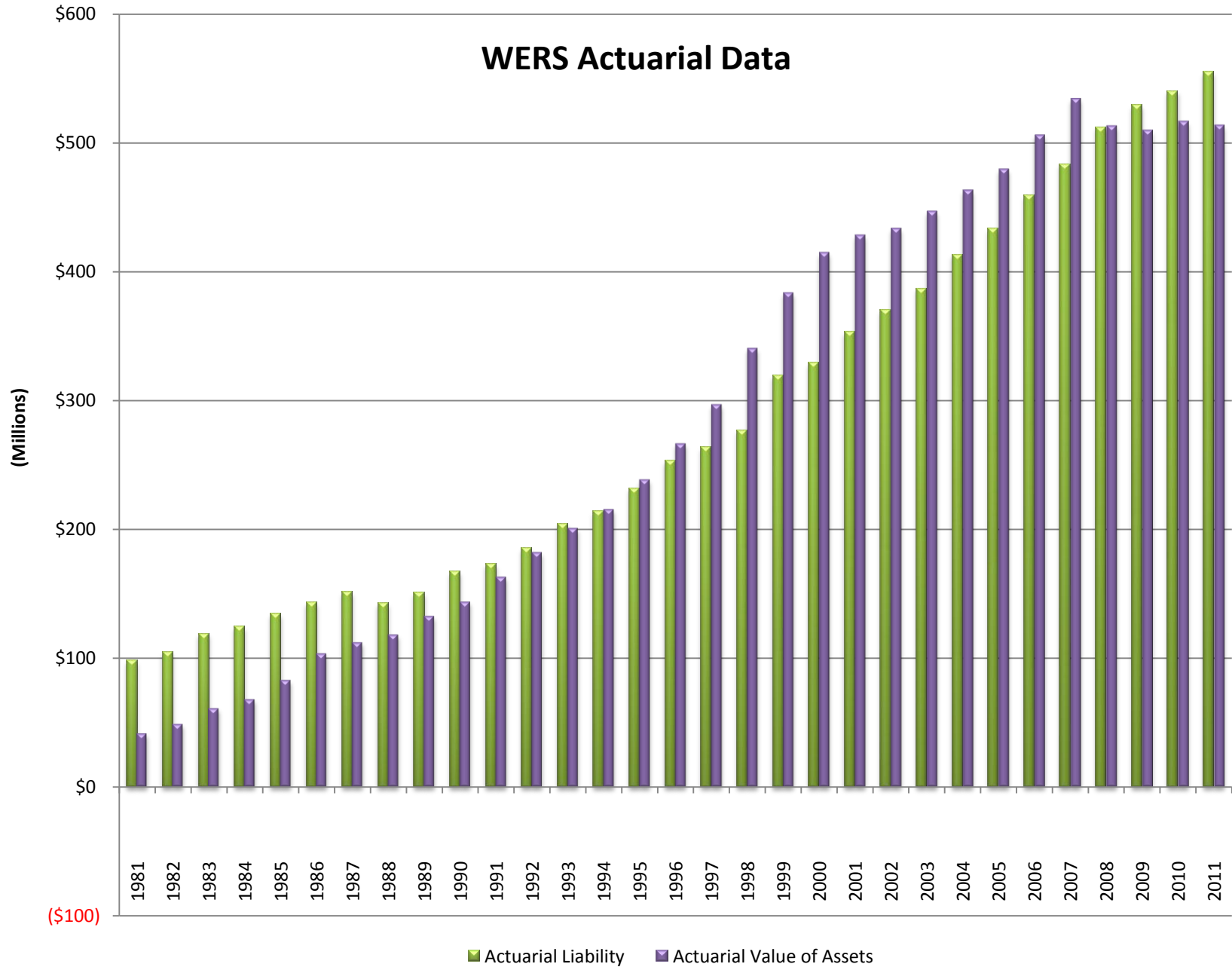
WERS Active Members by Plan



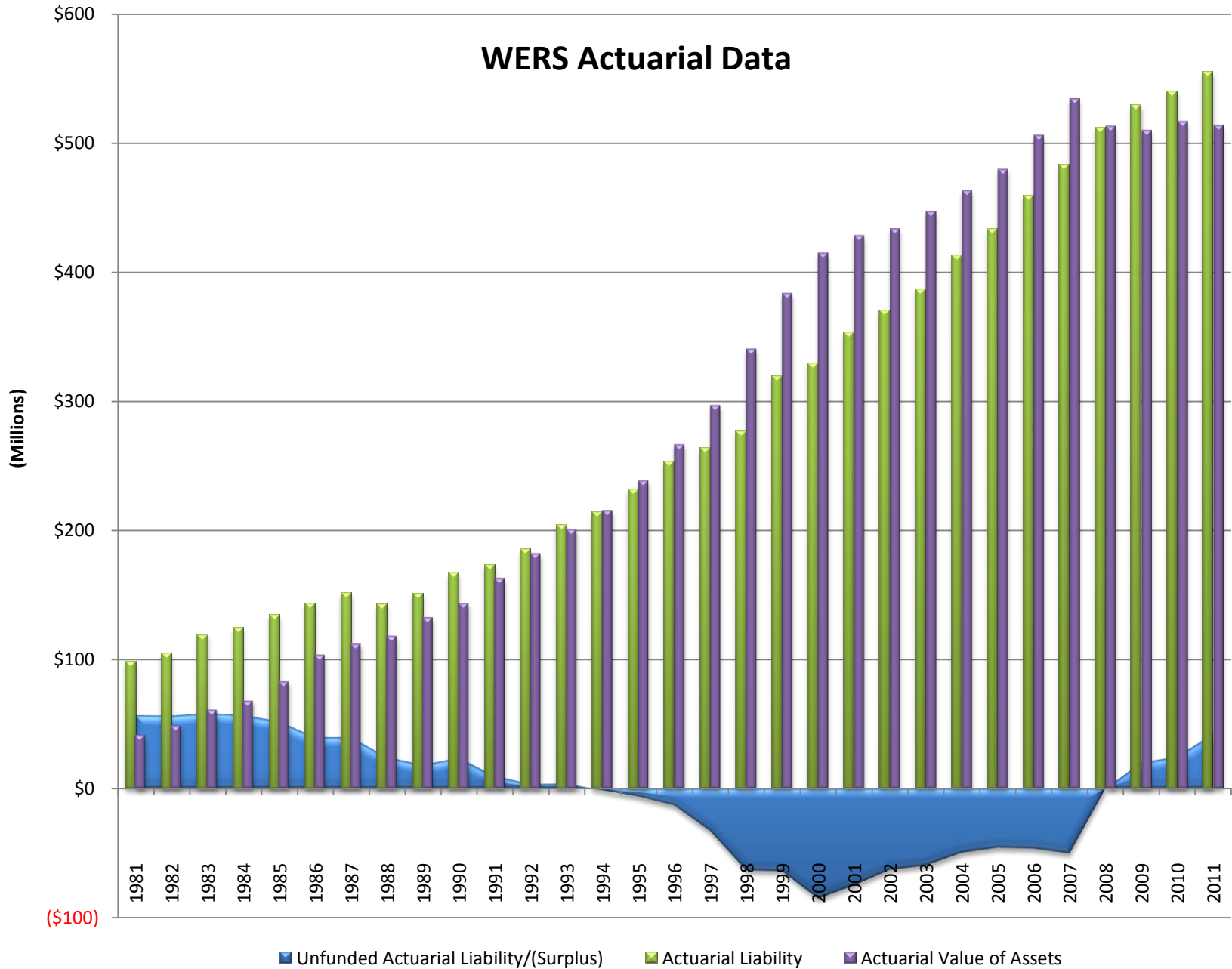
WERS Actuarial Data



WERS Actuarial Data

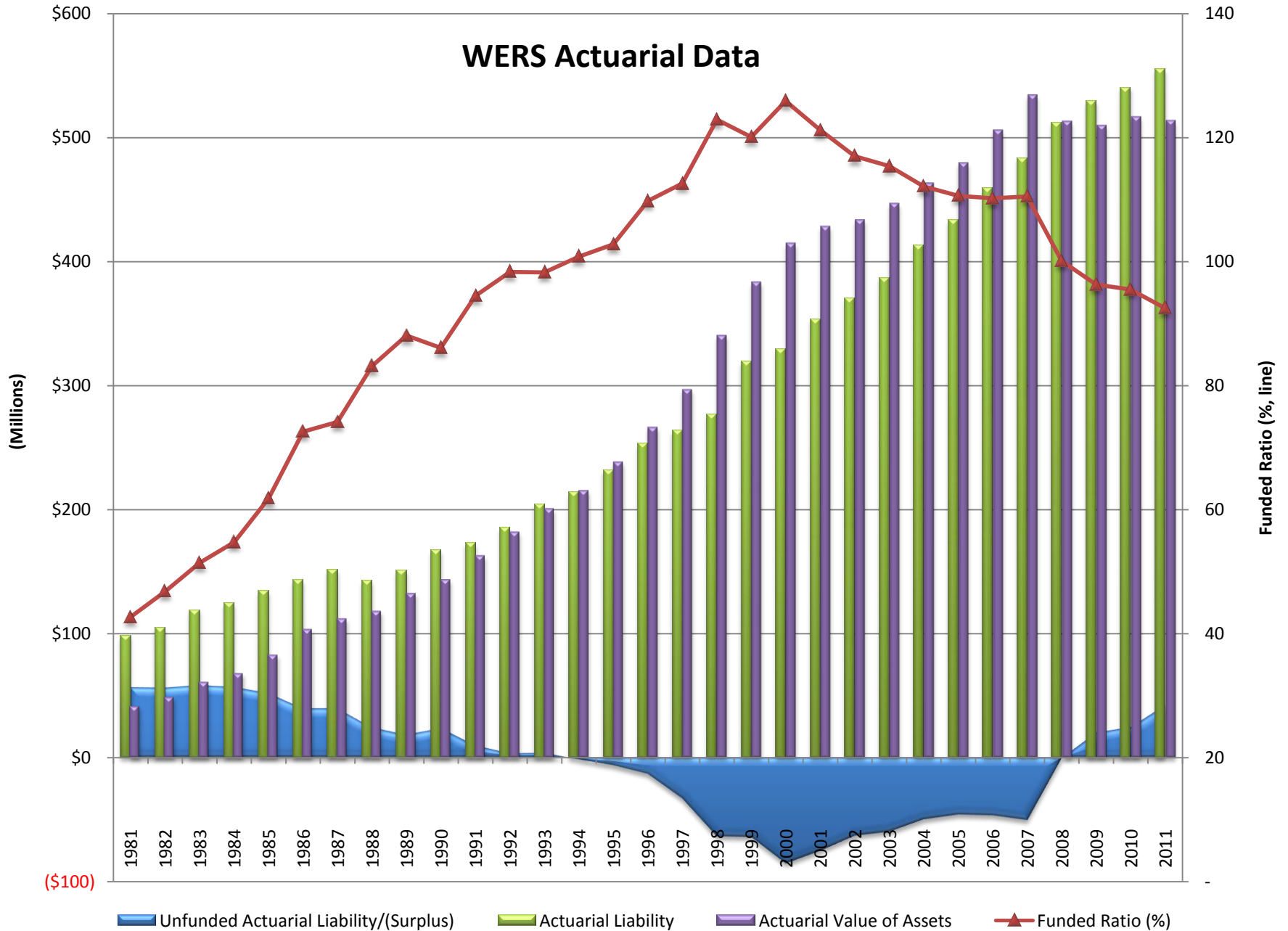


WERS Actuarial Data



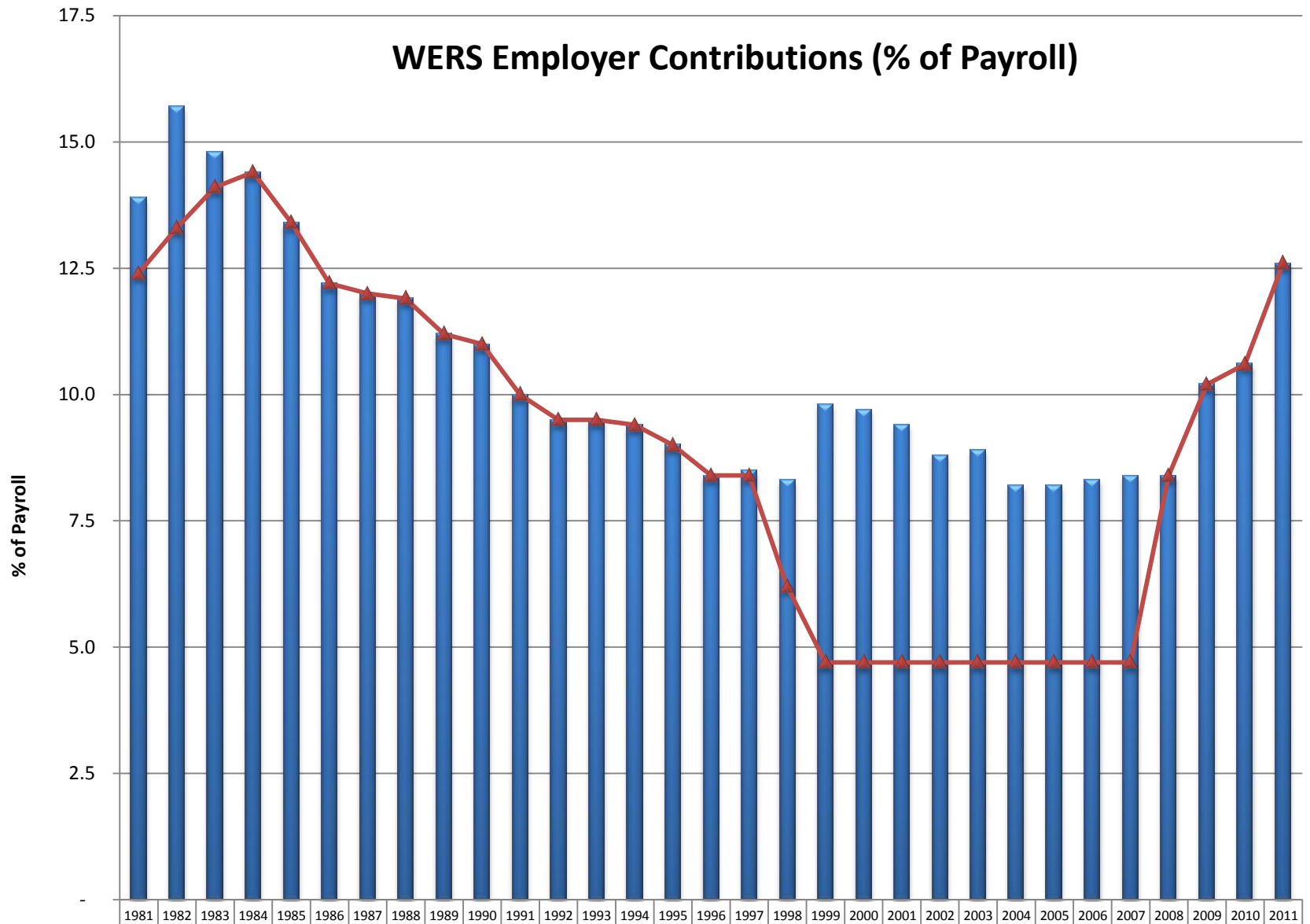
(\$100)

WERS Actuarial Data



(\$100)

WERS Employer Contributions (% of Payroll)



Employer Normal Cost plus UAL (if present)	13.9	15.7	14.8	14.4	13.4	12.2	12.0	11.9	11.2	11.0	10.0	9.5	9.5	9.4	9.0	8.4	8.5	8.3	9.8	9.7	9.4	8.8	8.9	8.2	8.2	8.3	8.4	8.4	10.2	10.6	12.6
Actual Employer Contributions	12.4	13.3	14.1	14.4	13.4	12.2	12.0	11.9	11.2	11.0	10.0	9.5	9.5	9.4	9.0	8.4	8.4	6.2	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	8.4	10.2	10.6	12.6

Police and Fire Retirement System

(Established January 1, 1965)

Plan A – Defined Benefit Plan

Applies to:

- All commissioned employees hired or rehired between January 1, 1965 and December 31, 1978
- All commissioned employees hired prior to January 1, 1965 that elected Plan A

Basic Plan Provisions

Employee:

- Maximum Pension Benefit: 75% of Final Average Salary; attained after 30 years of service
- 2% annual increase (non-compounded)
- Vesting achieved after 10 years of service

Normal Retirement Age: Age 50; but employees can retire at any age with 20 years of service

Surviving Spouse: Pension Benefit – Maximum benefit equal to 50% of employee's Final Average Salary plus annual increases

Member contribution: 8.0% of salary

City contribution: Actuarially determined rate

Plan B – Defined Benefit Plan

Applies to:

- All commissioned employees hired prior to January 1, 1965 that elected Plan B

Basic Plan Provisions

Employee:

- Maximum Pension Benefit equals 75% of Final Average Salary; attained after 30 years of service
- 2% annual increase (non-compounded)
- Vesting achieved after 10 years of service

Normal Retirement Age: Age 50; but employees can retire at any age with 20 years of service

Surviving Spouse: Pension Benefit – 50% of employee's Final Salary plus annual increases

Member contribution: 6.0% of salary

City contribution: Actuarially determined rate

Plan C – Defined Benefit Plan

Applies to:

- All commissioned employees hired or rehired on or after January 1, 1979

Basic Plan Provisions

Employee:

- Maximum Pension Benefit: 75% of Final Average Salary; attained after 30 years of service
- 2% annual increase (non-compounded)
- Vesting achieved after 10 years of service

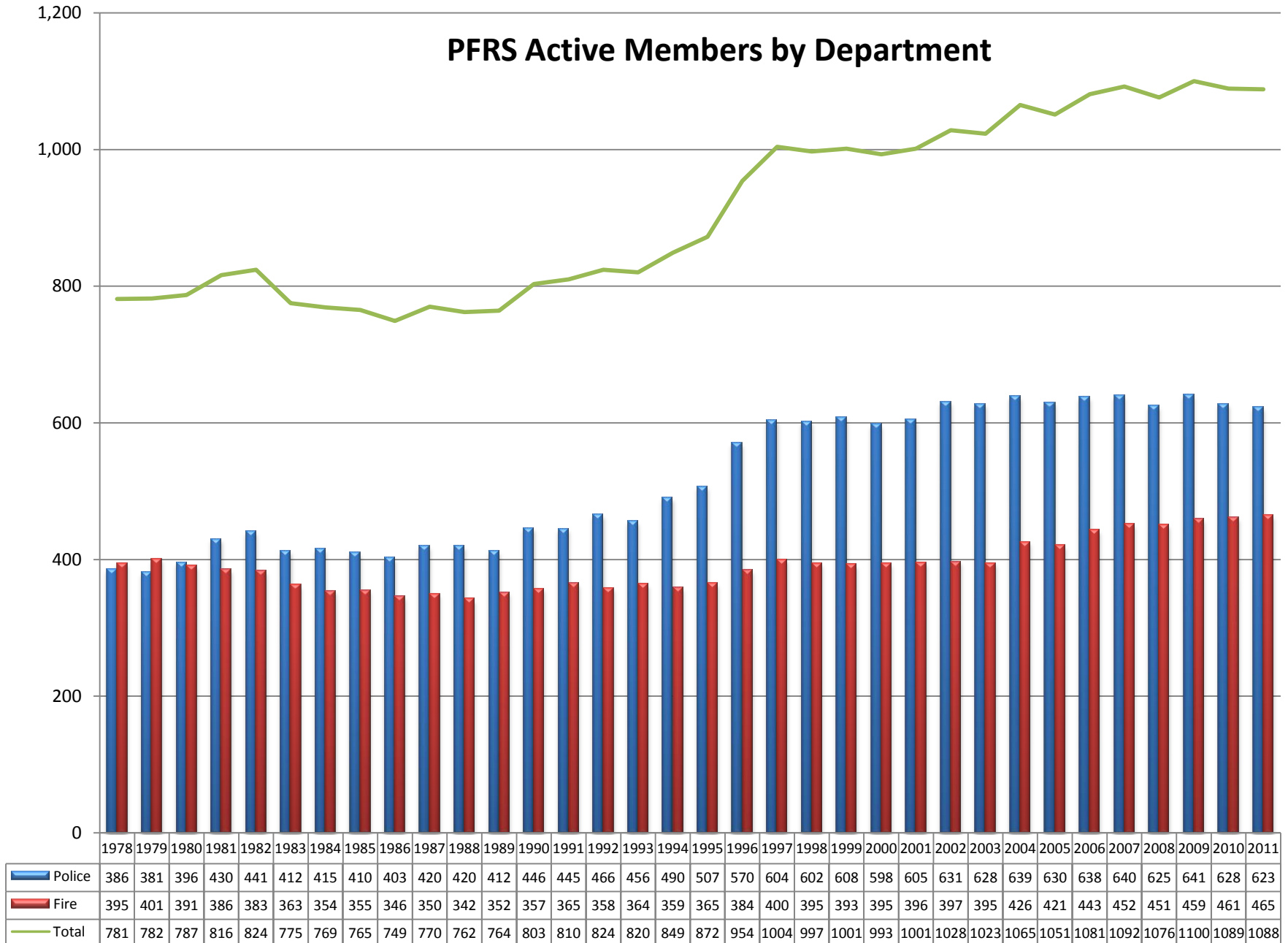
Normal Retirement Age: Age 55; but employees can retire at any age with 30 years of service or at age 50 with 20 years of service

Surviving Spouse: Pension Benefit – Maximum benefit equal to 50% of employee's Final Average Salary plus annual increases

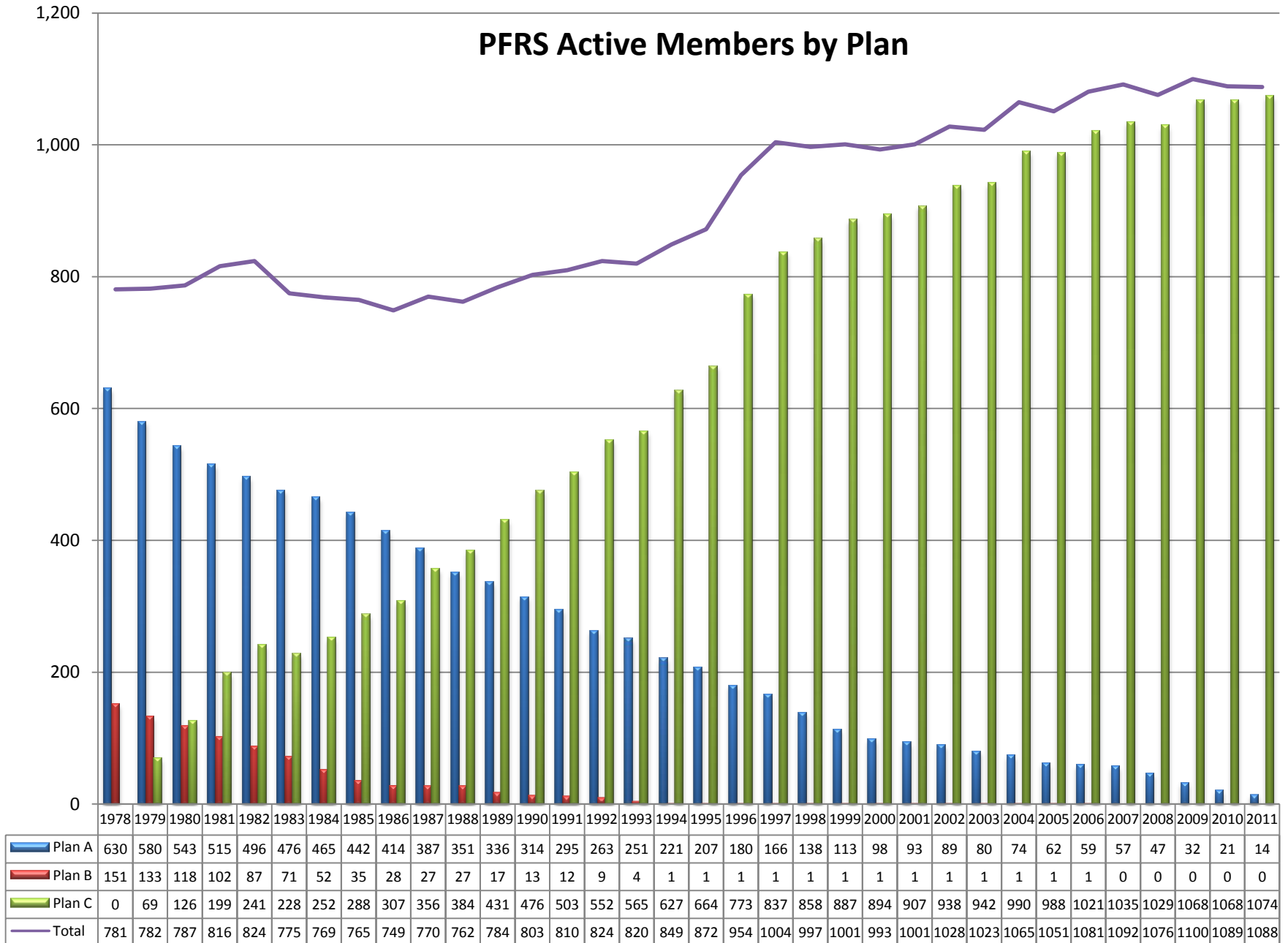
Member contribution: 7.0% of salary

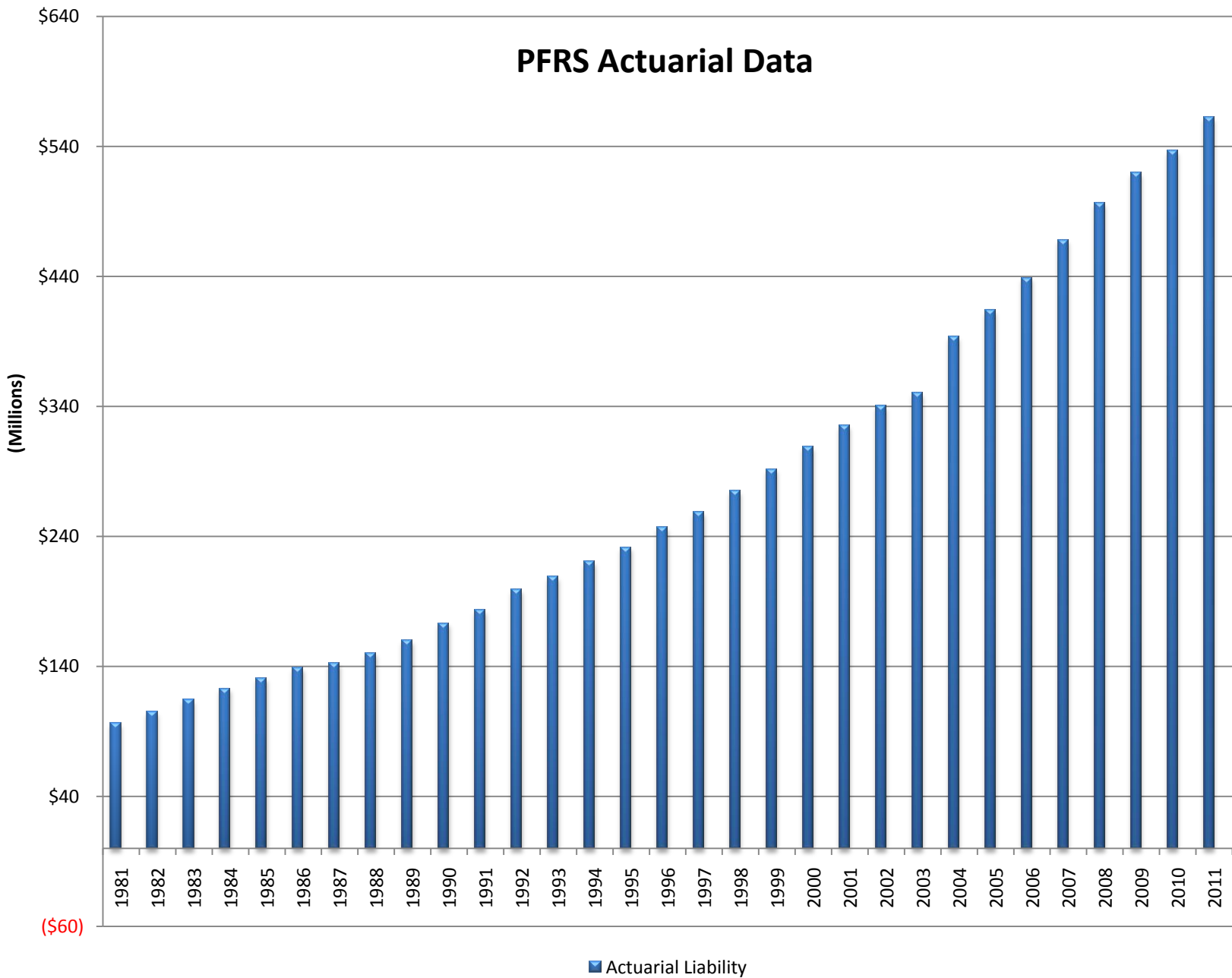
City contribution: Actuarially determined rate

PFRS Active Members by Department



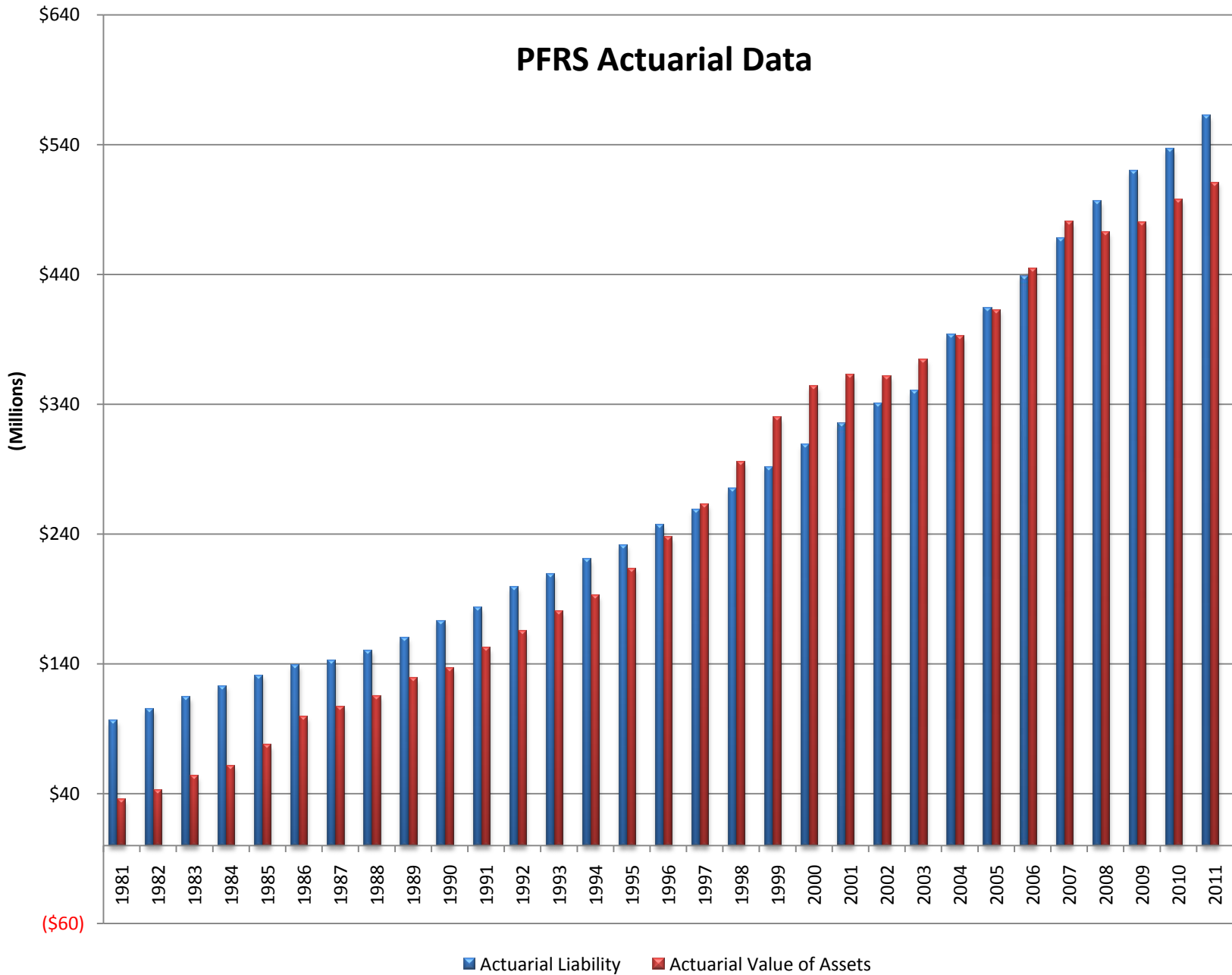
PFRS Active Members by Plan





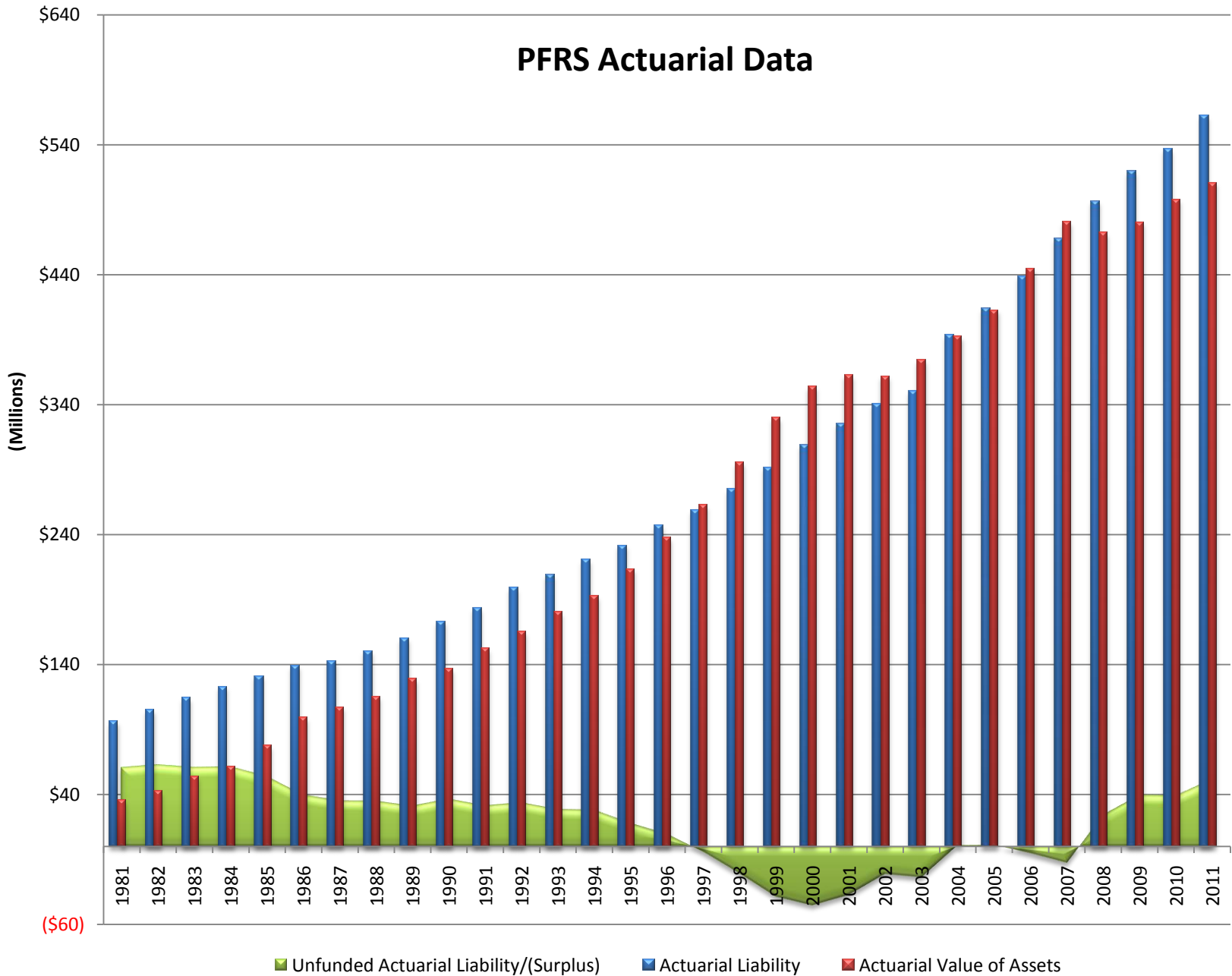
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PFRS Actuarial Data

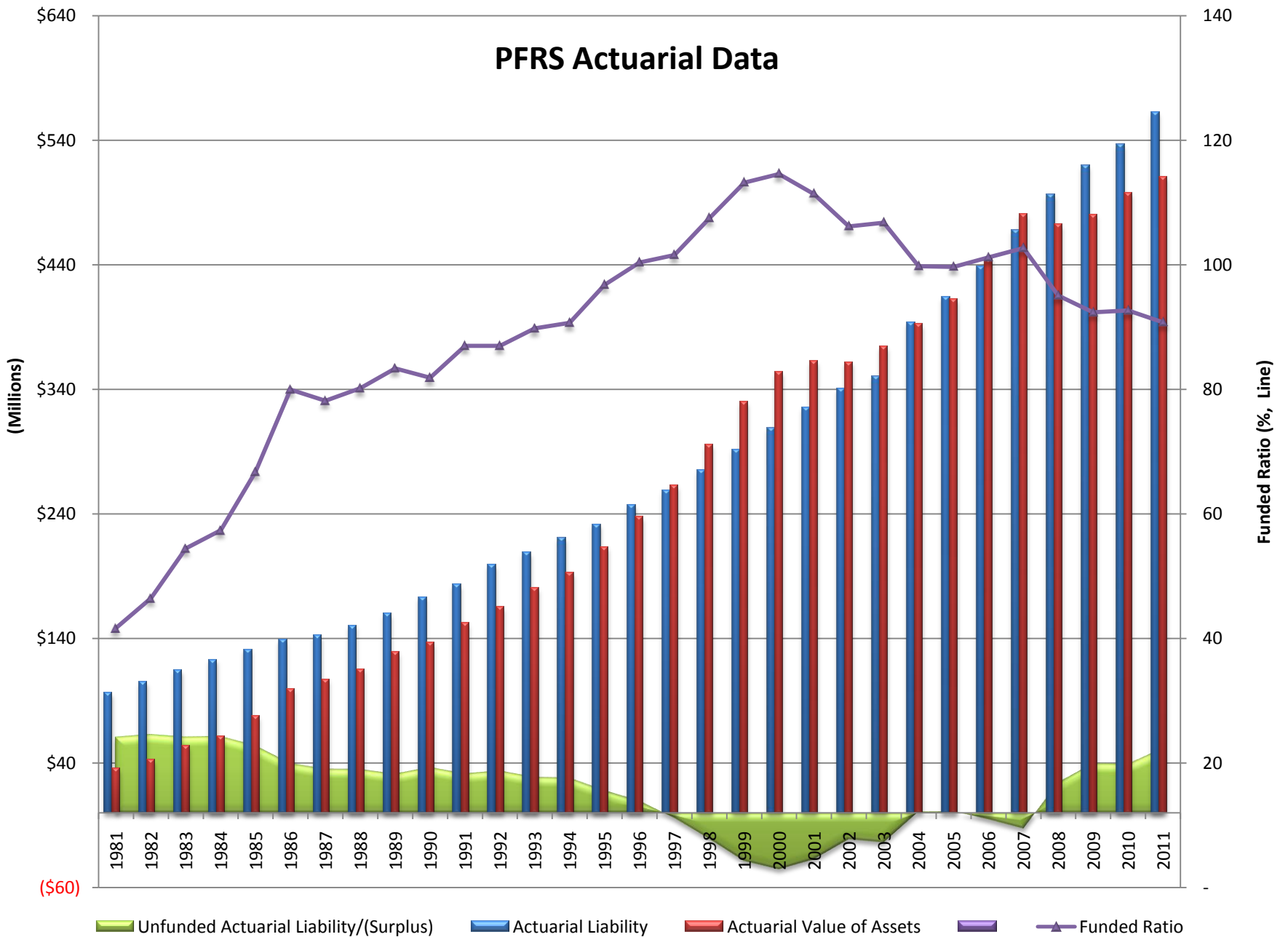


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PFRS Actuarial Data

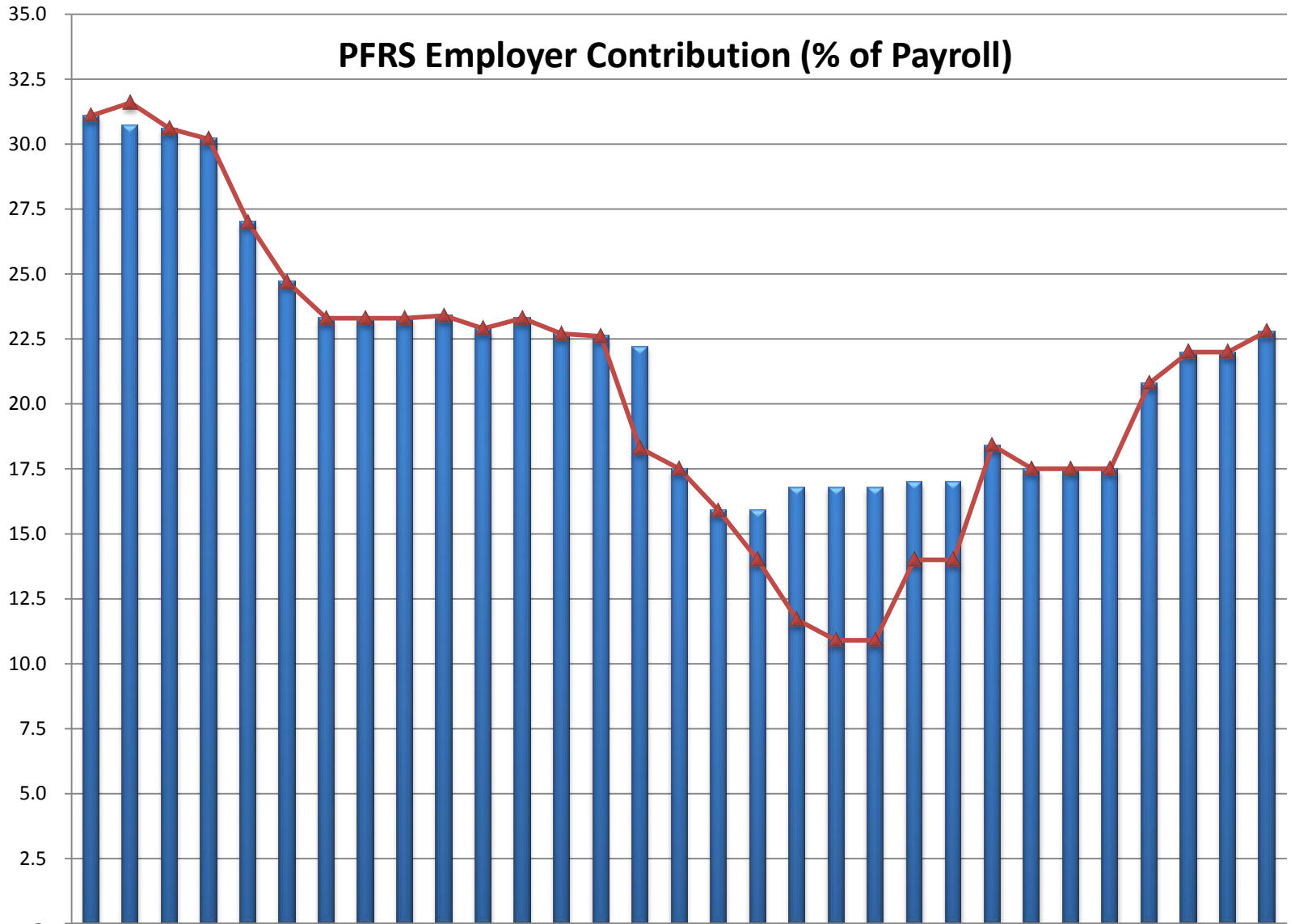


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PFRS Employer Contribution (% of Payroll)

% of Payroll



Employer Normal Cost plus UAL (if present)	31.1	30.7	30.6	30.2	27.0	24.7	23.3	23.3	23.3	23.4	22.9	23.3	22.7	22.6	22.2	17.5	15.9	15.9	16.8	16.8	16.8	17.0	17.0	18.4	17.5	17.5	17.5	20.8	22.0	22.0	22.8
Actual Employer Contributions	31.1	31.6	30.6	30.2	27.0	24.7	23.3	23.3	23.3	23.4	22.9	23.3	22.7	22.6	18.3	17.5	15.9	14.0	11.7	10.9	10.9	14.0	14.0	18.4	17.5	17.5	17.5	20.8	22.0	22.0	22.8

Wichita Employees' Retirement System

City Council Workshop

Presented by

Tim Herman, FSA, MAAA

Milliman

June 26, 2012

Actuarial Valuation

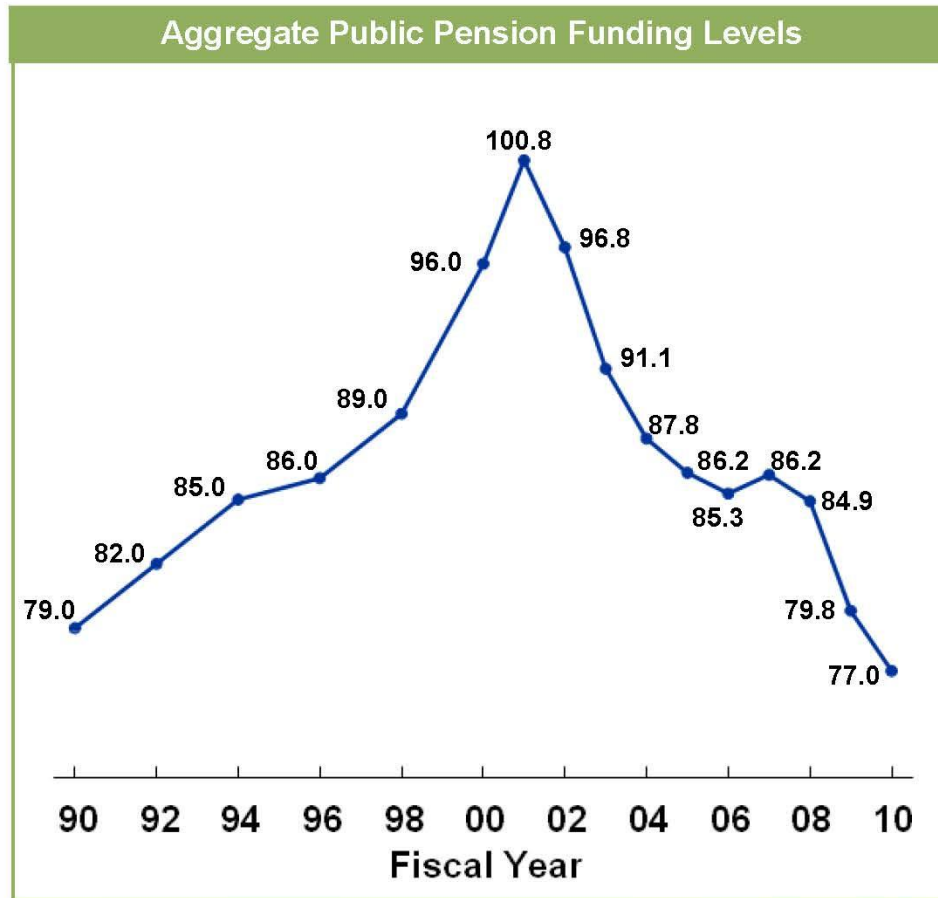
How Retirement Plans Work

$$\begin{array}{ccccc} \text{Contributions} & + & \text{Investment} & = & \text{Benefit} & + & \text{Expenses} \\ & & \text{Earnings} & & \text{Payments} & & \end{array}$$

- Trustees monitor this relationship over long term
- Fund Actuary provides input to Trustees via valuation process

NASRA Public Fund Survey for Fiscal Year 2010

Aggregate public pension funding levels



Source: Public Fund Survey Summary of Findings for FY 2010

MEDIAN FUNDING LEVEL IS 77.3%

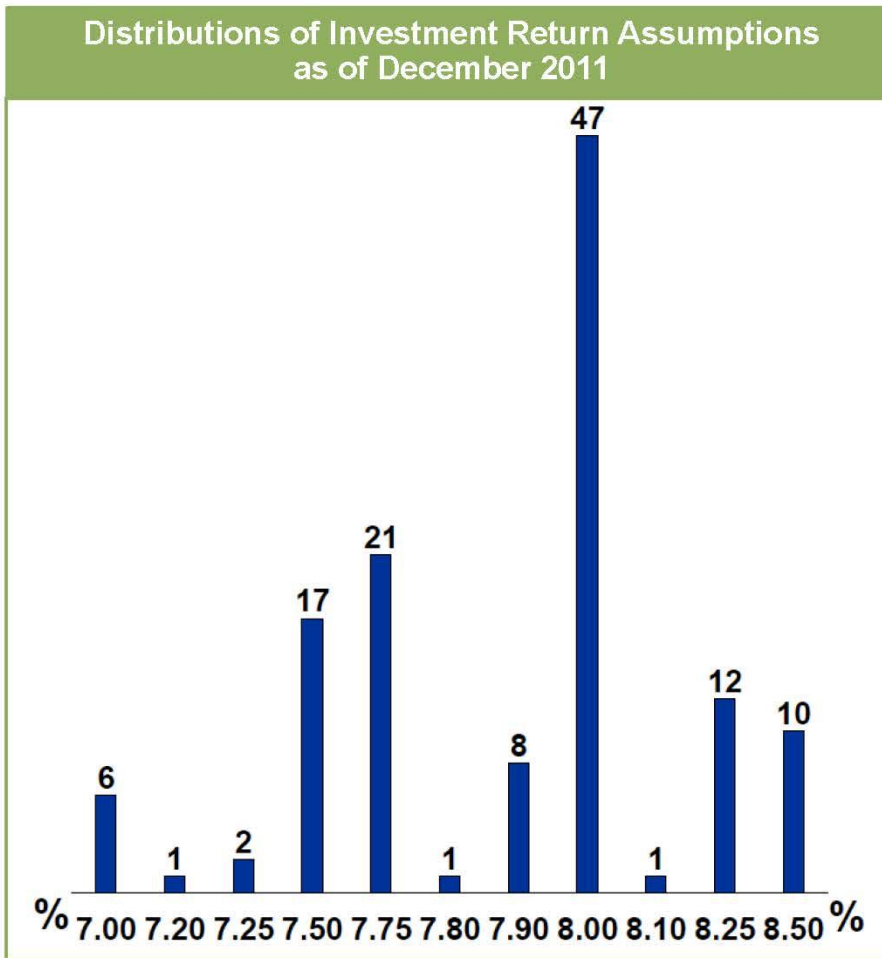
Wichita Retirement Systems:

- WERS 92.5%
- PFRS 90.8%

Funds in the Public Fund Survey account for about 85% of public plan assets and participants.

NASRA Public Fund Survey for Fiscal Year 2010

Distribution of Investment Return Assumptions



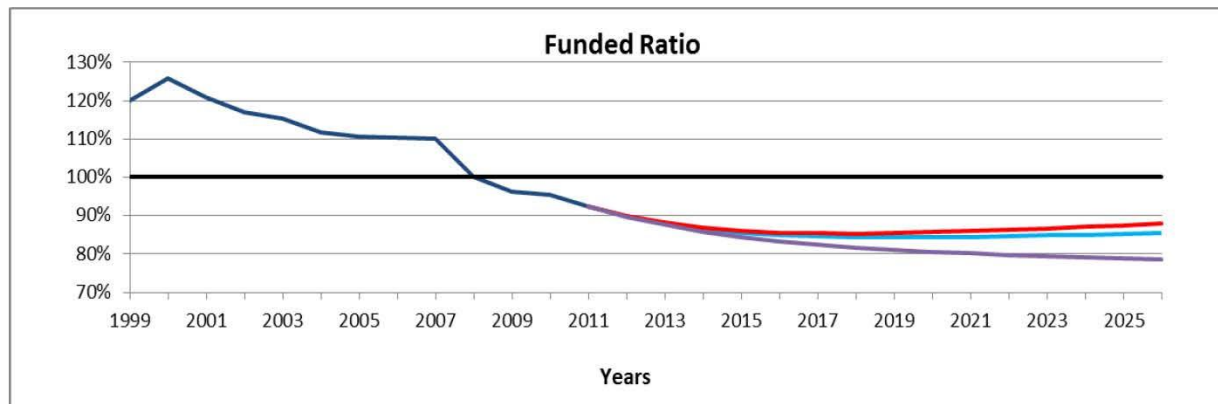
7.75% INVESTMENT RETURN
ASSUMPTION FOR WICHITA
RETIREMENT SYSTEMS

“Many plans have reduced their investment return assumption in recent years, although the median and modal assumption remains 8.0 percent.”

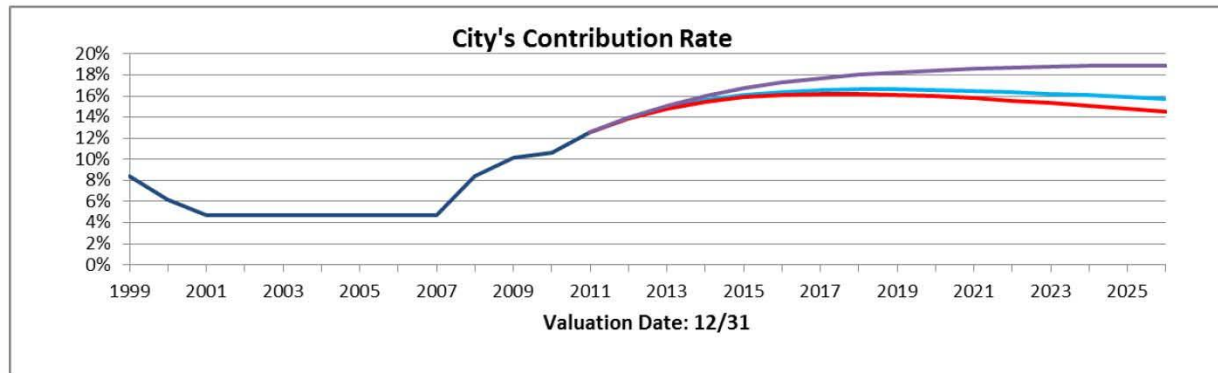
Source: Public Fund Survey Summary of Findings for FY 2010

Wichita Employees' Retirement System

Impact of Assumed Investment Returns on Projection Results



- Funded Ratio =
Actuarial Assets / Accrued Liability
- Current Plan Provisions



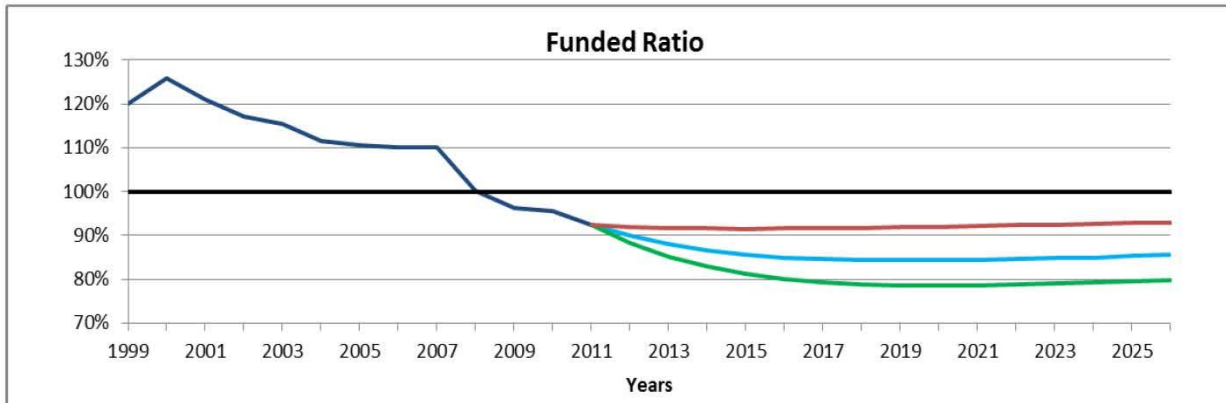
ASSUMED RATES OF RETURN FOR PROJECTIONS

- 8.00% for all future years
- 7.75% for all future years
- 7.00% for all future years

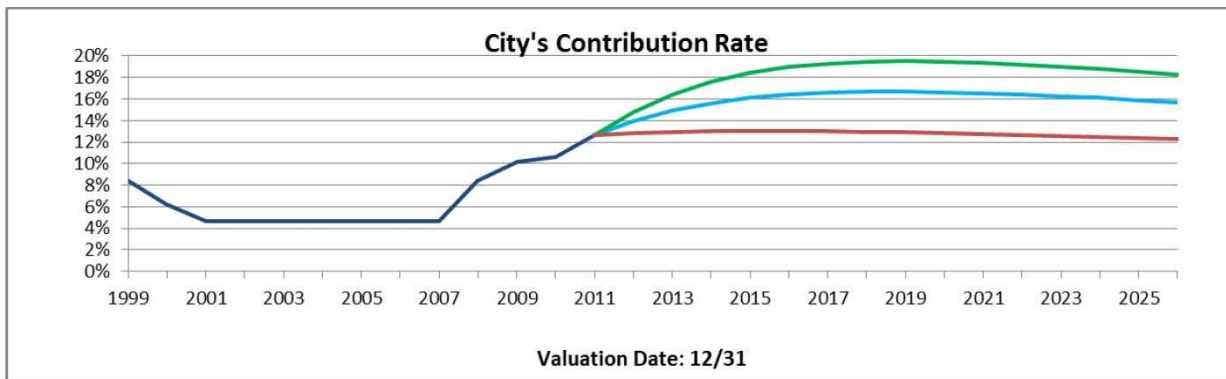
Historical results through 12/31/2011. Projected results for 12/31/2012 and later valuations. Emerging contribution rates and funded ratios will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.

Wichita Employees' Retirement System

Impact of Assumed Investment Returns on Projection Results



- Funded Ratio =
Actuarial Assets / Accrued Liability
- Current Plan Provisions



ASSUMED RATES OF RETURN FOR PROJECTIONS

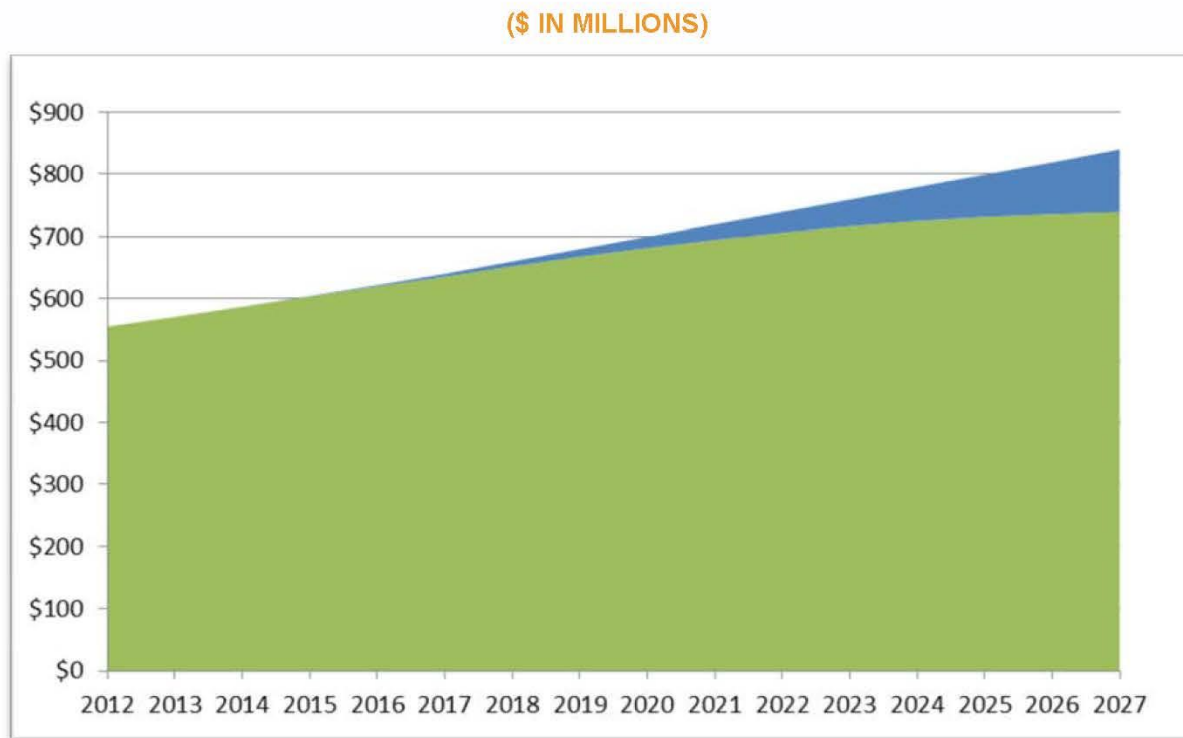
- 18% in 2012, 7.75% thereafter
- 7.75% for all future years
- 0% in 2012, 7.75% thereafter

Historical results through 12/31/2011. Projected results for 12/31/2012 and later valuations. Emerging contribution rates and funded ratios will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.

Impact of Reduced Costs for New Members

Wichita Employees' Retirement System

Projected Growth of Accrued Liability Over Time



KEY PROJECTION ASSUMPTIONS:

- 7.75% investment return assumption for accrued liabilities
- Open group
- Current pension plan design continues

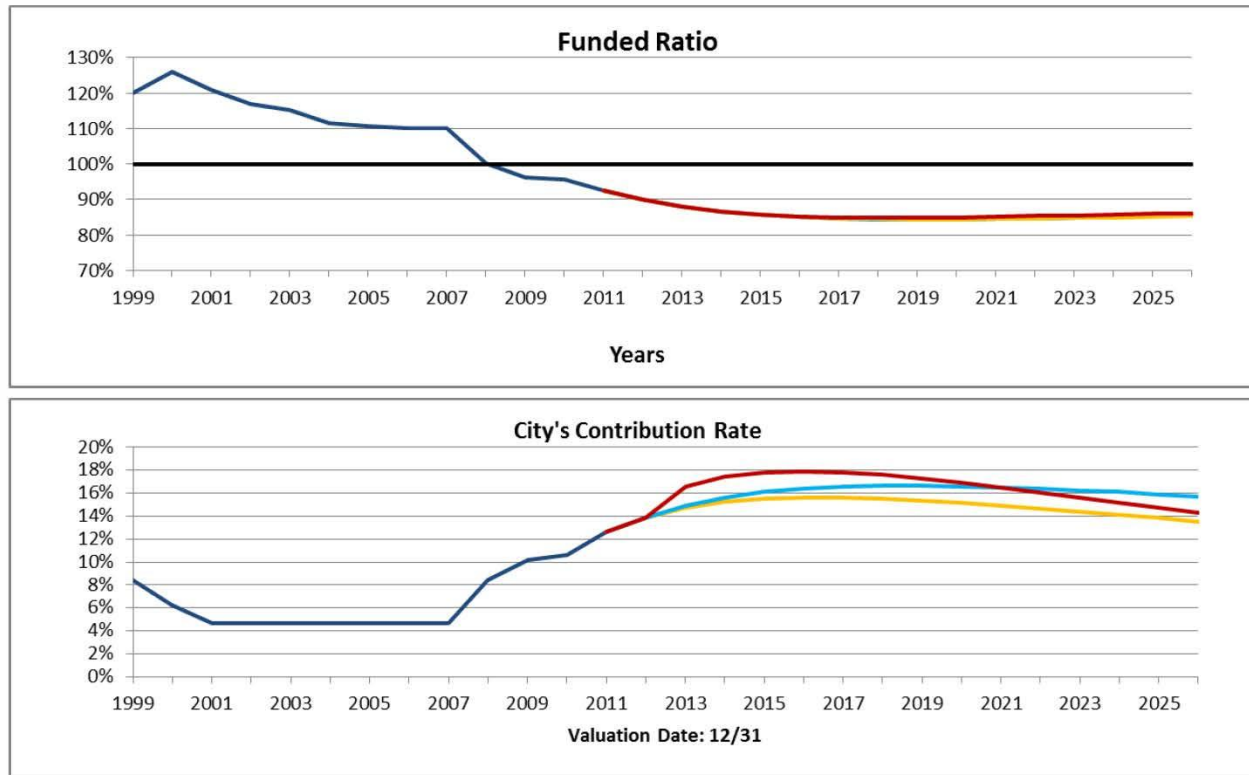
MANAGING ACCRUED LIABILITY THROUGH PLAN DESIGN:

- Accrued liability for members hired before 2014.
- Accrued liability for members hired after 2013.

Emerging accrued liability will vary from that presented to the extent that actual experience differs from that projected by the actuarial assumptions.

Wichita Employees' Retirement System

Impact of New Tier on Projection Results



RETIREMENT BENEFIT STRUCTURE FOR MEMBERS HIRED AFTER 2013:

- Current plan provisions
- 20% reduction in new entrant costs *
- City contributes 6% of pay to defined contribution plan

* Changes in plan provisions to achieve 20% reduction would need to be determined at a later date.

Expected reduction may not be exactly 20%:

- Varies by which plan provisions changed
- Based on plan demographics

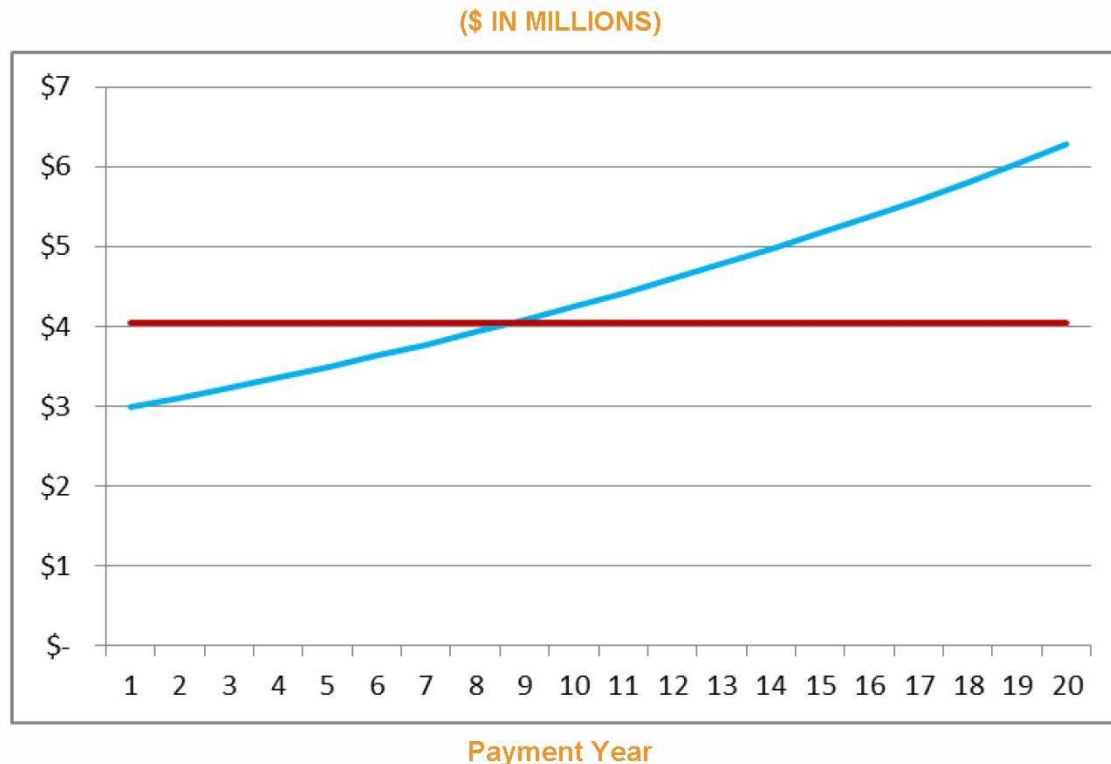
Historical results through 12/31/2011. Projected results for 12/31/2012 and later valuations.

Emerging contribution rates and funded ratios will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.

- Over the long-term, City contributions to a defined contribution plan of 6% will reduce Employer Contribution Rate. However, in the short term, City contributions in total are higher because of a change in the way the Unfunded Accrued Liability is paid in the pension plan.

Wichita Employees' Retirement System

Payment of Unfunded Accrued Liability from 12/31/2011 Actuarial Valuation



The payment of Unfunded Accrued Liability is re-determined at each actuarial valuation date. Future payments of Unfunded Actuarial Liability will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.

CURRENT APPROACH:

- \$41.9 M Unfunded Accrued Liability in WERS as of 12/31/2011
- City payment of this liability is calculated as a level percent of payroll over a 20 year time period
- Key Assumptions:
 - 7.75% investment return
 - 4.00% payroll growth

CLOSED FUND APPROACH:

- City payment is calculated as a level dollar amount over 20 year time period
- Fund is “closed” in Alternative 2 where all members hired after 2013 participate in a defined contribution plan
- This approach is consistent with current accounting standards under GASB

ANNUAL DOLLAR PAYMENTS OF UNFUNDED ACCRUED LIABILITY

Current Approach

Closed Fund Approach

APPENDIX

Wichita Retirement Systems

Available Tools to Manage Sustainability and Volatility in Pension Plans

	Plan Management Tool											
	Plan Design	Contribution Level	Investments									
Sustainability	<ul style="list-style-type: none">• Cost of benefits earned• Costs based on expected investment return and demographics	<ul style="list-style-type: none">• Always contribute cost of benefits earned	<ul style="list-style-type: none">• More investment earnings means less employer contributions required									
Volatility	<ul style="list-style-type: none">• Unfunded Liability• Prospectively reduce size of liability• Compensation averaging• Early retirement	<ul style="list-style-type: none">• Contribute more than minimum required• Fund to maintain “right” level of surplus	<div>Current Investments:</div> <ul style="list-style-type: none">• 70% equities, 30% fixed income• Funded Ratios at 12/31/2011<table><tr><td></td><td>Actuarial</td><td>Market</td></tr><tr><td>WERS</td><td>92.5%</td><td>82.6%</td></tr><tr><td>PFRS</td><td>90.8%</td><td>81.9%</td></tr></table>		Actuarial	Market	WERS	92.5%	82.6%	PFRS	90.8%	81.9%
	Actuarial	Market										
WERS	92.5%	82.6%										
PFRS	90.8%	81.9%										

- **IN A DC PLAN, VOLATILITY IS GREATLY REDUCED BECAUSE THERE IS NO UNFUNDED LIABILITY.**
 - Level of City contributions determined by Wichita
 - May depend on employee behavior (e.g. 401k type match)

Comparison of Defined Benefit to Defined Contribution Plans

Feature	DB	DC
Who Bears Risks? <ul style="list-style-type: none"> Investment Longevity Inflation <ul style="list-style-type: none"> Pre-retirement Post-retirement 	Employer Employer Employer Employer	Employee Employee Employee Employee
Plan Costs	<ul style="list-style-type: none"> Employer pay most Variable employer 	<ul style="list-style-type: none"> Employee/Employer share cost Fixed employer cost
Retirement Income	<ul style="list-style-type: none"> Design plan to meet objectives Cannot outlive income 	<ul style="list-style-type: none"> No guarantees Pays more benefits upon early termination
Who Benefits the Most?	<ul style="list-style-type: none"> Older, longer service employees Fast trackers 	<ul style="list-style-type: none"> Younger, shorter service employees
Investment Management	<ul style="list-style-type: none"> Professional Managers 	<ul style="list-style-type: none"> Individuals manage own accounts Data shows lower realized returns on individual accounts

DEFINED BENEFIT (DB)

- Plan promises to pay specified benefit at retirement
- example is 1% of final average pay for each year of service

DEFINED CONTRIBUTION (DC)

- specified contributions paid to account balance
- retirement benefit is the account balance (contributions plus investment income)
- example is 3% money purchase plan

HYBRID PLAN

- DB or DC plan with features of both
- example is Cash Balance plan

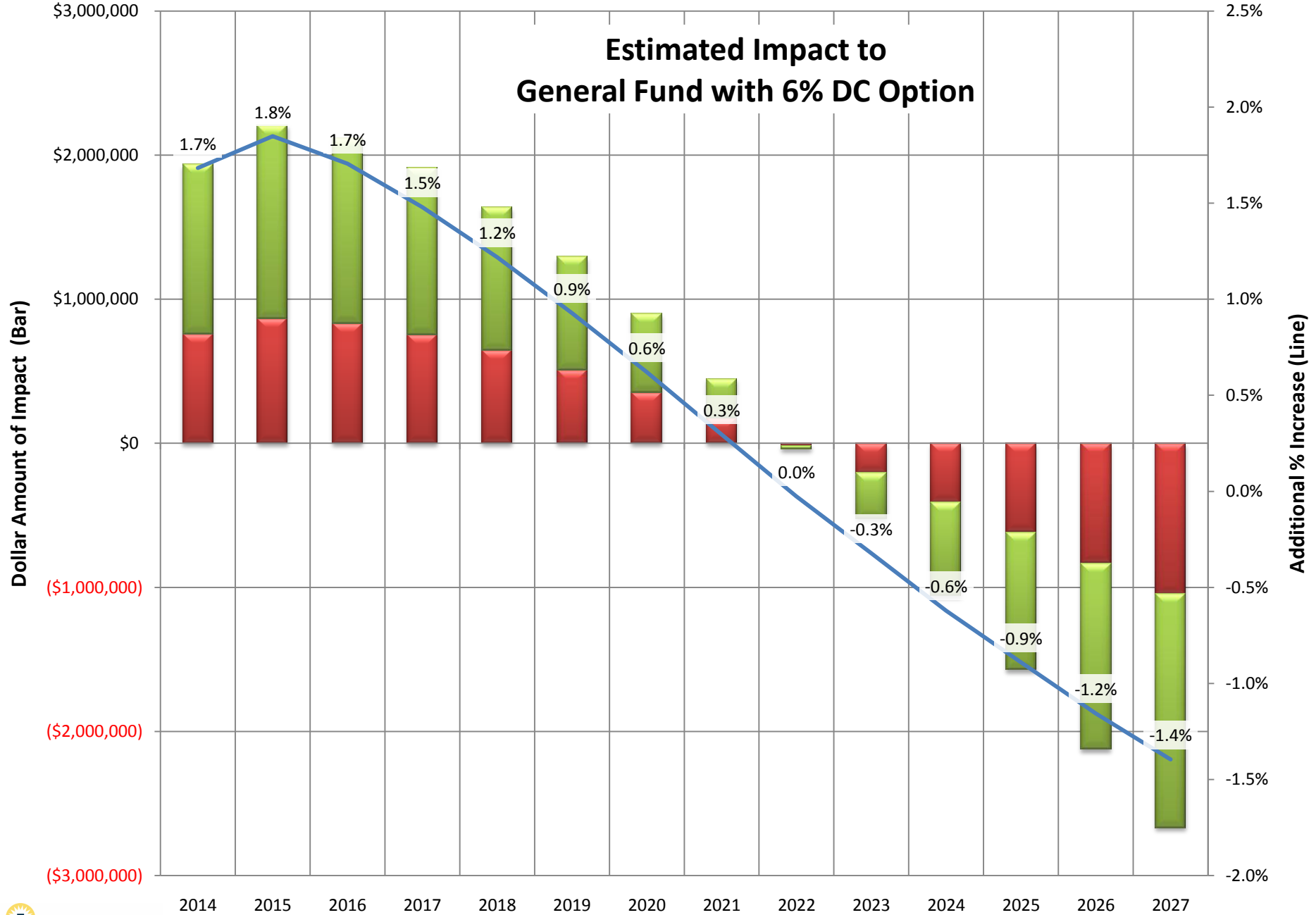
Important Notices

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- This work product is based on the December 31, 2011 actuarial valuation reports dated April 3, 2012 for the Wichita Employees' Retirement System and the Wichita Police and Fire Retirement System ("Wichita Retirement Systems"). A copy of the valuation reports may be obtained at www.wichita.gov/CityOffices/Finance/Treasury/Pension/Publications/. The valuation reports and this work product are a complex, technical analyses that assume a high level of knowledge concerning the Wichita Retirement Systems' operations, and uses data from the Wichita Retirement Systems, which Milliman has not audited.
- Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.
- Emerging costs and liabilities will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.
- This report and its use are subject to the terms and provisions of our Consulting Services Agreement with the City of Wichita dated August 15, 2007.



Supplemental Information
Prepared by
City of Wichita Pension Office

Estimated Impact to General Fund with 6% DC Option



Wichita Retirement Systems' Asset Allocation

Asset Class	Target Allocation
Domestic Equity	40%
Large Cap	32
Small Cap	8
International Equity	22
Core (EAFE)	9
Core Plus (ACWI ex-U.S.)	10
Emerging Markets	3
Fixed Income	25
Core	11
Core (Plus)	11
TIPS	3
Real Estate	5
Core	4
Value-Added	1
Timber	5
Commodities	3